



DEFENSE ACQUISITION UNIVERSITY

CMQ 230 - Quality Control Graphics and Charting

150327

*Course Learning/Performance Objectives followed by its
enabling learning objectives on separate lines if specified.*

1	<p>Given sample quality control graphics data, recognize the concepts and use of quality control graphics.</p> <p>Given sample quality control graphics data, recognize the concepts and use of quality control graphics.</p> <p>Recall attribute and variable data used in quality control graphics.</p> <p>Define the purpose of constant sample sizes and variable sample sizes.</p> <p>Recognize the difference between statistical and non-statistical sampling.</p> <p>Recognize the principles of the Central Limit Theorem (CLT).</p> <p>Recognize the principles of rational subgroups.</p>
2	<p>Given sample attribute and variable quality control graphics, identify the characteristics of and tools used to illustrate attribute and variable data.</p> <p>Recognize the purpose for using check sheets, checklists, and logs.</p> <p>Identify the correct method of constructing check sheets, checklists, and logs.</p> <p>Recognize the different types of quality control graphics.</p> <p>Identify the reasons for using the various types of quality control graphics.</p> <p>Recognize the correct methods of constructing flowcharts, Pareto charts, pie charts, histograms, cause and effect (fishbone) diagrams, scatter diagrams, and run charts.</p> <p>Select the appropriate quality control graphic for monitoring or analyzing a process, given a scenario.</p>
3	<p>Given a scenario including sample data and a simulated work environment, choose the steps to construct quality control graphics and supporting data sheets.</p> <p>Identify the situations when to use check sheets, checklists, and logs.</p> <p>Choose the steps needed to construct check sheets, checklists, and logs.</p> <p>Choose the steps needed to construct a flowchart.</p> <p>Choose the steps needed to construct a Pareto chart.</p> <p>Choose the steps needed to construct a pie chart.</p> <p>Choose the steps needed to construct a histogram.</p> <p>Choose the steps needed to construct a cause and effect (fishbone) diagram.</p> <p>Choose the steps needed to construct a scatter diagram.</p> <p>Choose the steps needed to construct a run chart.</p>
4	<p>Given data and scenarios, recognize how Statistical Process Control (SPC) relates to the Quality Assurance (QA) process.</p> <p>Identify SPC as it relates to quality control charts used in QA.</p> <p>Identify the purpose of 3 Sigma and 6 Sigma.</p> <p>Recognize the differences between 3 Sigma and 6 Sigma.</p> <p>Recognize the purpose of quality control graphics in SPC.</p> <p>Identify the different uses of control limits and specification limits.</p> <p>Recognize construction control limits for p, np, c, and u attribute charts.</p> <p>Recognize construction control limits for X-Bar and R, X-Bar and s, and X-Bar and MR variable charts.</p> <p>Identify quality control graphics patterns, including runs, hugging, and trends.</p> <p>Recognize the use rules for determining statistical control to distinguish between common-cause and special-cause variation.</p> <p>Recognize the concepts of process capability (Cp) and process capability index (Cpk).</p> <p>Recognize the concept of pre-control.</p>